

APPENDIX

1. Apparatus for introducing and distributing a charge including a metal oxide and solid fuel to a shaft furnace having a rectangular interior cross section for the production of molten metal from said metal oxide comprising:

[means for feeding said charge to] means for conveying said charge to said shaft furnace;

means for distributing said charge from said conveying means to said shaft furnace to form in said interior cross section of said shaft furnace a vertical column of said charge **comprising a longitudinal central portion of said solid fuel surrounded by a longitudinal portion of said metal oxide** [in a selected pattern of said metal oxide and solid fuel] to maximize exchange of heat between ascending hot gas within said interior cross section of said shaft furnace and said vertical column of said charge.

2. Cancel.

3. Cancel.

4. Cancel.

5. Cancel.

6. Cancel.

12. A method for distributing a charge including a metal oxide and solid fuel in a shaft furnace having a rectangular interior cross section, with the charge being used for the production of molten metal from the metal oxide of the charge, comprising:

forming in said interior cross section of said shaft furnace a vertical column of said charge;

distributing said metal oxide and said solid fuel to produce a selected cross sectional pattern therefrom in said vertical column of said charge comprising a central portion of said solid fuel surrounded by an outer portion of said metal oxide to maximize exchange of heat between ascending hot gas and said vertical column of said charge; and

continuing said distributing of said metal oxide and said solid fuel to maintain said selected cross sectional pattern during said production of said molten metal.

16. Cancel.

17. The method of claim [16] 12, wherein particles of said solid fuel are distributed within said outer portion of said metal oxide to increase permeability thereof to improve flow of said ascending hot gas through said vertical column of said charge.